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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,768	01/27/2005	Tadao Kojima	Q84023	3799

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SUGHRUE MION, PLLC  
2100 Pennsylvania Avenue, N.W.  
Washington, DC 20037

EXAMINER
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BERNSHTEYN, MICHAEL

ART UNIT	PAPER NUMBER
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1796

NOTIFICATION DATE	DELIVERY MODE
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11/09/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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## Office Action Summary

Application No.

10/510,768

Applicant(s)

KOJIMA ET AL.

Examiner

Michael M. Bernshteyn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply .

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 1-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-17 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>06/11/2007</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This Office Action follows a response filed on August 14, 2007. Claims 13 and 16 have been amended; claims 1-12 have been withdrawn, no claims have been cancelled or added.
2. In view of the amendment(s), the rejections of claims 13-17 under 35 U.S.C. 102(b) as being anticipated by Miyagawa et al. (JP 2002-228805), claims 13 and 16 as being anticipated by Hashimoto et al. (JP 63-110410), claims 13, 15 and 16 as being anticipated by Chiba (U. S. Patent 5,400,182) and claims 13 and 16 as being anticipated by Karita (U. S. Patent Application Publication 2003/0099783) have been withdrawn.
3. Applicant's arguments with respect to claims 13-17 have been considered but are moot in view of the new ground(s) of rejection.
4. Claims 13-17 are active.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyagawa et al. (JP 2002-228805) in view of Koizumi et al. (U. S. Patent Application Publication 2001/0033360).

With regard to the limitations of claims 13 and 16, Miyagawa discloses that a resin joined optical element has a base material and a **resin layer formed on the base material** (abstract). As the base material, inorganic **glass** and organic glass are used (page 3, [0017]). The resin, which constitutes the resin layer is not limited, it can be a thermosetting resin such as epoxy resin, urethane resin, unsaturated polyester resin, and etc. or a thermoplastic resin, such as photosensitive acrylic resin, methacrylic resin, polymethymethacrylate, polystyrene, polycarbonate, etc. (page 3, [0019]).

Miyagawa discloses that as shown in drawing 5, performed **silane coupling agent** raises adhesion with resin (page 6, [0036]).

Miyagawa discloses that a resin assembling-die optical element joins the resin layer to the front face of the base material, which consists of glass etc. This resin assembling-die optical element is manufactures by the approaches, such as the compound-die aspheric surface casting method, which forms the resin layer of a request configuration in the base material front face, by pouring in and stiffening a resin constituent (a resin precursor constituent being included) between the base material and the die using dice (metal mold etc.). On these descriptions, the lens manufactured by this compound-die aspheric surface casting method, can be considered as instantly claimed a lens system (page 1, [0005]).

With regard to the limitations of claims 13 and 16, Miyagawa does not disclose that the resin composition has been cured by irradiating ultraviolet rays to the resin composition from more than one side of the resin composition.

Koizumi discloses that by applying ultraviolet rays UV from **both sides** of the forming die 22 and the convex lens 25, the ultraviolet-curing resin 3a is cured (page 3, [0041]).

Both references are analogous art because they are from the same field of endeavor concerning new resin composition for hybrid lens and method for producing hybrid lens.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the irradiating ultraviolet rays to the

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resin composition to cure from more than one side of the resin composition as taught by Koizumi in Miyagawa's resin joined optical element because by doing this, ultraviolet rays UV incident from the incident surface 1b can uniformly cure the entirety of the ultraviolet-curing resin 3a. This makes it possible to form a hybrid lens in which a precise aspherical composite layer 3 is transferred (US'360, page 3, [0043]), and thus to arrive at the subject matter of instant claims 13 and 16.

With regard to the limitations of claims 14 and 17, Miyagawa discloses that the maximum of the resin thickness is 850 micrometers or more, preferably 1 mm or more, which is within the claimed range (page 2, [0011]).

With regard to the limitations of claim 15, Miyagawa discloses that as shown in drawing 1, the maximum thickness 12 of the resin layer 11 is 4 or more times of the minimum thickness 13, which is within the claimed range (page 3, [0016]).

6. Claims 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto et al. (JP 63-110410) in view of Koizumi et al. (U. S. Patent Application Publication 2001/0033360).

With regard to the limitations of claims 13 and 16, Hashimoto discloses that a **resin layer 20** of a composite type aspherical lens consisting of the **glass substrate 10** formed as, for example, biconvex lens and the resin layer 20 formed of the polymer layer of an acrylic UV curing resin is formed on a **face** of 11. After the face 11 and face 14 are treated with a **silane coupling agent**, the resin layer 20 and the 2<sup>nd</sup> part 21, which is part thereof are tightly adhered and formed thereon. The end 21 of the resin layer 20 presses the **glass lens 10** from the outer periphery of the lens 10 and,

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therefore, the adhesiveness between the lens 10 and the resin layer 20 is improved. The exfoliation of the resin layer even after the long-time resting in the light-moisture environment is thereby obviated (abstract).

With regard to the limitations of claims 13 and 16, Hashimoto does not disclose that the resin composition has been cured by irradiating ultraviolet rays to the resin composition from more than one side of the resin composition.

Koizumi discloses that by applying ultraviolet rays UV from **both sides** of the forming die 22 and the convex lens 25, the ultraviolet-curing resin 3a is cured (page 3, [0041]).

Both references are analogous art because they are from the same field of endeavor concerning new resin composition for hybrid lens and method for producing hybrid lens.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the irradiating ultraviolet rays to the resin composition to cure from more than one side of the resin composition as taught by Koizumi in Hashimoto's composite type optical element because by doing this, ultraviolet rays UV incident from the incident surface 1b can uniformly cure the entirety of the ultraviolet-curing resin 3a. This makes it possible to form a hybrid lens in which a precise aspherical composite layer 3 is transferred (US'360, page 3, [0043]), and thus to arrive at the subject matter of instant claims 13 and 16.

7. Claims 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiba (U. S. Patent 5,400,182) in view of Koizumi et al. (U. S. Patent Application Publication 2001/0033360).

With regard to the limitations of claims 13 and 16, Chiba discloses that in order to provide an optical element with an aspheric surface, as well as a process by which the optical element can be mass-produced with high efficiency and consistent precision, the improved optical element with an aspheric surface includes a glass substrate and an overlying light-transmissive resin layer worked to have an aspheric surface. This optical element can be produced by molding a light-transmissive resin composition as it is cured between a glass substrate and a mold having an aspheric surfaced shape (abstract).

Chiba discloses that epoxy resins are particularly preferred. Advantageous epoxy resins are those of bisphenol A type, bisphenol AD type and bisphenol F type, which are cured with an acid anhydride, an amine or any other curing agents. Acid anhydrides that can be used as curing agents include hexahydrophthalic anhydride and methyl hexahydrophthalic anhydride, and amines that can be used as curing agents include aliphatic polyamines, polyaminoamides, aromatic diamines, alicyclic diamines and imidazoles. Other curing agents that can be used include phenolic resins, amino resins, mercaptan compounds, dicyanodiamides and Lewis acid complex compounds (col. 2, lines 41-54).

The light-transmissive resin layer may be formed directly on the glass substrate to produce a composite optical element with an aspheric surface that has good



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adhesion between the substrate and the resin layer. The adhesion between the two members can be further enhanced by preliminarily forming a layer of **silane coupling agent** on the **glass substrate**. Any known silane coupling agent may be used and examples include silane compounds such as  $\gamma$ -glycidoxytrimethoxysilane,  $\gamma$ -glycidoxypropyltrimethoxysilane,  $\gamma$ -glycidoxypropyltriethoxysilane,  $\gamma$ -glycidoxypropyldimethoxysilane,  $\gamma$ -(3,4-epoxycyclohexyl)ethyltrimethoxysilane,  $\gamma$ -methacryloxypropyltrimethoxysilane, and  $\gamma$ -methacryloxypropylmethyl-dimethoxysilane, as well as the products of their hydrolysis. These silane coupling agents may be used either on their own or as admixtures (col. 3, lines 10-26).

With regard to the limitations of claims 13 and 16, Chiba does not disclose that the resin composition has been cured by irradiating ultraviolet rays to the resin composition from more than one side of the resin composition.

Koizumi discloses that by applying ultraviolet rays UV from **both sides** of the forming die 22 and the convex lens 25, the ultraviolet-curing resin 3a is cured (page 3, [0041]).

Both references are analogous art because they are from the same field of endeavor concerning new resin composition for hybrid lens and method for producing hybrid lens.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the irradiating ultraviolet rays to the resin composition to cure from more than one side of the resin composition as taught by Koizumi in Chiba's resin optical element because by doing this, ultraviolet rays UV

incident from the incident surface 1b can uniformly cure the entirety of the ultraviolet-curing resin 3a. This makes it possible to form a hybrid lens in which a precise aspherical composite layer 3 is transferred (US'360, page 3, [0043]), and thus to arrive at the subject matter of instant claims 13 and 16.

8. Claims 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karita (U. S. Patent Application Publication 2003/0099783) in view of Koizumi et al. (U. S. Patent Application Publication 2001/0033360).

With regard to the limitations of claims 13 and 16, Karita discloses that the ultraviolet-curable resin fluid used for obtaining aspheric lens should be a photopolymeric acrylate-based ultraviolet-curable resin fluid, which is cured by a radical polymeric reaction (page 4, [0047]). Preferably, the surface of the lens 11 should be silane-coupled in advance to increase the adhesiveness between the lens 11 and the molded resin layer 10A. The **silane coupling agent** can be diluted to a 2 weight % ethanol solution (page 4, [0049]).

A composite aspheric face was produced by using as the convex lens to constitute the base of the aspheric lens a **glass lens** (page 5, [0061]).

With regard to the limitations of claims 13 and 16, Karita does not disclose that the resin composition has been cured by irradiating ultraviolet rays to the resin composition from more than one side of the resin composition.

Koizumi discloses that by applying ultraviolet rays UV from **both sides** of the forming die 22 and the convex lens 25, the ultraviolet-curing resin 3a is cured (page 3, [0041]).

Both references are analogous art because they are from the same field of endeavor concerning new resin composition for hybrid lens and method for producing hybrid lens.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the irradiating ultraviolet rays to the resin composition to cure from more than one side of the resin composition as taught by Koizumi in Karita's aspheric lens because by doing this, ultraviolet rays UV incident from the incident surface 1b can uniformly cure the entirety of the ultraviolet-curing resin 3a. This makes it possible to form a hybrid lens in which a precise aspherical composite layer 3 is transferred (US'360, page 3, [0043]), and thus to arrive at the subject matter of instant claims 13 and 16.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**Conclusion**

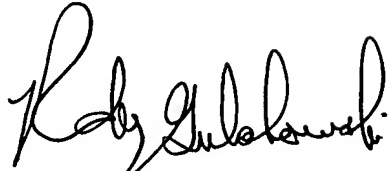
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael M. Bernshteyn whose telephone number is 571-272-2411. The examiner can normally be reached on M-Th 8-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael Bernshteyn  
Patent Examiner  
Art Unit 1796

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10/17/2007

  
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